APPENDIX D

LIVESTOCK FORAGE

IMPLEMENTATION

A number of procedures and resource considerations are common to all four Alternatives.

Selective Management

Based upon the selective management criteria, the grazing allotments in the Monument Planning Area have been categorized as shown in Table D-1 in this Appendix. This categorization and resource information has guided development of the management actions proposed in the alternatives of the Monument RMP/EIS. When the resource situation in an allotment changes after implementation of management decisions, the allotment may be recategorized.

Management objectives for the allotment categories are (M) maintain current satisfactory condition, (I) improve current unsatisfactory condition, and (C) manage custodially while protecting existing resource values. Public investments in range improvements, AMP development, monitoring, and use supervision will have highest priority in "I" (Improve) allotments, followed by "M" (Maintain) and "C" (Custodial) allotments. Within these three categories, allotments will also be prioritized for range investments and management effort, depending upon the intensity of resource conflicts and/or the potential for improvements. The potential for improvement considers not only resource constraints, but also the ability of an allotment to produce a positive return on investment within a reasonable time.

Range improvement or other funds will be allocated to range improvements in "I" allotments in order to resolve resource-use conflicts and to increase resource productivity. Publicly-financed improvements will be implemented on allotments in the "M" and "C" categories only as needed to meet multiple use objectives or to protect existing resource values.

Implementing Changes in Allotment Management

Allotment management plans, Cooperative Resource Management Plans, or other appropriate plans are commonly used to present, in detail, the types of changes required in an allotment, and to establish a schedule for implementation. Actions set forth under the plan that affect the environment will be analyzed and compared to alternative actions. The following sections contain discussions of the types of changes likely to be recommended in an activity plan and the guidance that applies to these administrative actions.

Livestock Use Adjustments

The need for livestock use adjustments on some allotments has been identified in each alternative. This need may result from land disposal, allocation of land to other public uses, lack of sufficient forage to support existing active preference, or availability of forage in excess of existing active preference.

Increases and reductions proposed are target levels based upon the best existing information, and will be implemented through coordination and consultation with the permittees involved.

If agreement cannot be reached with the permittees on the amount of reduction needed to balance active preference with forage productivity, needed adjustments will be implemented by decision under 43 CFR 4160. When livestock use adjustments are implemented by decision, the decision will be based upon operator consultation, range survey data, and monitoring of resource conditions. All adjustments will be made in the manner specified in current regulations.

Monitoring will be used to measure the changes due to new range management practices and to evaluate the effectiveness of management changes in meeting stated objectives. Livestock use adjustments could be modified during the implementation period based upon information provided by ongoing monitoring.

Range Improvements and Treatments

Typical range improvements and treatments and the general procedures to be followed in implementing them are described in this appendix. The extent, location, and timing of these actions will be based on the allotment-specific management objectives adopted through the resource management planning process, interdisciplinary development and review of proposed actions, permittee contributions, and BLM funding capability.

All allotments in which range improvement funds are to be spent will be subjected to an economic analysis. Private contributions toward range improvements will be encouraged by assigning higher implementation priority to improvements partially or fully funded by private sources. However, improvements proposed and financed solely by private sources must be consistent with land use and management objectives for the affected allotments.

Grazing Systems

Grazing systems would be implemented under Alternatives B, C, and D. The type of system to be implemented will be based on consideration of the following factors:

1. allotment-specific management objectives;
2. resource characteristics, including vegetation, soil, and water availability;
3. operator needs; and
4. implementation costs.

Typical grazing systems, which have proven successful in the planning area are described in this appendix. Grazing systems are usually incorporated into an Allotment Management Plan (AMP) or a Coordinated Resource Management Plan (CRMP). Allotments for which AMP or CRMP development is proposed in Alternatives B, C, and D include Antelope, Cedar Fields, East Minidoka, Gunnery, Kimama, Minidoka, Schodde, Shoshone, and Wildhorse.

Conversions

Livestock conversions from sheep use to cattle use would be allowed in Alternatives B, C, and D. In Alternative A, conversions would be allowed only in those allotments currently covered by AMPs containing conversion clauses. Conversions would follow the Shoshone District Conversion Policy in order to maintain existing multiple use values and to reduce conflicts with other uses.

The District Conversion Policy is based upon past practice and current guidance and regulations. The general guidelines of the policy are:

1. Previous commitments to conversions made in approved AMPs would be honored.

2. Environmental Assessments would be completed to identify impacts of the conversions and mitigating measures necessary to meet multiple use objectives.

3. Concerns of other permittees in the affected allotment would be considered in analysis of the conversion proposal.

4. An allotment conversion plan would be prepared and approved.

5. The amount of conversion from sheep to cattle would be in proportion to the allotment's suitability for cattle grazing.

6. All conversions would be initially conservative (50 percent conversion for the first three years as modified by suitability and water availability).

7. Necessary fencing would be completed prior to cattle use.

8. Sufficient water would be available.

9. Results of ongoing monitoring studies would determine whether the new AMP and amount of conversion were satisfactory.

10. Final amounts converted would depend upon the desired season of use, initial balance between spring and fall sheep preference, and resource response.

Future Livestock Use Adjustments

If the results of resource monitoring studies show that the proposed grazing management is not meeting the multiple use objectives of the Monument Resource Management Plan, livestock use adjustments will be made in accordance with the BLM grazing administration regulations and existing policy. Livestock use adjustments could take the form of changes in the grazing system, changes in season of use, reductions or increases in active preference, or a combination of all of these.

RANGE IMPROVEMENTS

The following design features, construction practices, and mitigation measures are common to the several kinds of range improvements proposed in

the Monument RMP. Structural improvements are generally installations which help control livestock distribution, while nonstructural improvements are vegetation treatments.

Structural Improvements

Fences

New fences would provide exterior allotment boundaries, divide allotments into pastures, and protect sites having other values from livestock disturbance. Fencing would be threeor four-strand barbed-wire built in accordance with BLM specifications. In big-game habitat, fences would be constructed with a top wire no higher than 42 inches above ground level and a smooth bottom wire at least 16 inches above ground level. Existing fences that create wildlife movement problems would be modified. Where fences cross existing roads, cattleguards or gates would be installed. Gates would be installed every half mile and in corners, as needed. Fence lines may be cleared to the extent necessary for construction, but mechanical clearing of vegetation to bare soil would not be allowed.

Cattleguards

Cattleguards would be 8 feet across and 12 to 24 feet wide, depending upon the traffic type and pattern.

Wells

Wells would generally be located on high points so that outlying troughs could be supplied by gravity flow from a storage tank adjacent to the well. In addition to the tank, the well site would generally have a well house to protect the generator, and would be enclosed by a fence. Open storage tanks would have bird ladders to allow wildlife use. All applicable State laws and regulations which apply to the development of ground water would be observed. Disturbed areas would be reseeded.

Pipelines and Troughs

Water pipelines would be buried in a trench excavated by a backhoe, with excavated material used for the backfill. Rigid plastic pipe may be used. Flexible pipe may also be installed with a ripper tooth. Valves would be installed at intervals along each pipeline to allow easy drainage to prevent freezing. Troughs would be placed where needed to provide an even distribution of livestock water. Each trough would have a bird ladder to allow wildlife use. Separate wildlife water storage and watering devices may also be constructed at regular intervals. Disturbed areas would be reseeded.

Roads

Several miles of new roads would be bladed to provide access to new water developments and to grazing areas which now receive little use. Existing vegetation would be eliminated and the soil surface would be bared. Depending upon the amount of traffic, herbaceous vegetation could reestablish itself upon the new roads without impairing their function.

Nonstructural Improvements

"Sage Grouse Management in Idaho" (Autenrieth 1981) will be used as a reference to assist in the design of proposed projects in sage grouse habitat.

Prescribed Fire

Prescribed fire may be used to release the native understory from sagebrush competition in areas proposed for brush control (see Map 16). Burning would be done to meet the objectives of this plan and in accordance with site-specific prescribed burn plans. The plant succession implications discussed in Appendix B would be carefully weighed in preparing burn plans. Where wildlife habitat is a major consideration, areas would be burned to create a mosaic of shrubby and herbaceous vegetation. Burned areas would be rested from livestock grazing for two growing seasons following treatment.

Plowing, Disking, and Seeding

This treatment would be used to eliminate brush and cheatgrass competition in order to establish new seedings. Treatment would be done in irregular patterns. Size limitations on individual treatment areas may be necessary in major wildlife habitat areas. Burrowing owl nest sites would not be treated. Seed would generally be planted with a standard rangeland drill. The seed mixture would include grass, forb, and shrub seeds as appropriate for the specific site and management objectives. Treated areas would not be grazed for at least two growing seasons following treatment.

Chemical Control of Vegetation

The use of chemicals to control unwanted vegetation would be considered when it was environmentally acceptable and a cost-effective method to meet management goals and objectives. All regulations and policies regarding the use of chemicals on public land would be followed.

Cost Effectiveness of Range Improvements

A benefit/cost analysis for AMP improvement packages will be completed before issuance of a final land use plan (RMP). The benefit/cost analysis will be used to help prioritize allotment investments based on projected economic returns.

Maintenance of Range Improvements

Structural improvements will be maintained by the permittees, while roads and vegetation treatments will be maintained by the BLM.

Rest-Rotation Grazing

Under a rest-rotation grazing system, the allotment is divided into pastures, usually with comparable grazing capacities. Grazing is deferred on various pastures during succeeding years in a rotation sequence with complete rest for a year also included in a planned sequence. Each pasture is systematically grazed and rested so that livestock production and other resource values are provided for, while the vegetation cover is simultaneously maintained or improved. This practice provides greater protection of the soil resource against wind and water erosion.

Any of several rest-rotation grazing systems may be used, depending upon the objectives for the allotment and the number of pastures.

Modified Rest-Rotation Grazing

The usual modification in the planning area is that spring and/or fall sheep grazing is permitted in the pasture which is rested from cattle use. There may be limitations on the amount of sheep use that can be made.

Deferred Rotation Grazing

Deferred rotation is the postponement of grazing on different parts of an allotment in succeeding years. This allows each pasture to rest successively during the growing season to permit seed production, establishment of seedlings, and restoration of plant vigor (American Society of Range Management 1964). One or more pastures are grazed during the spring, while the remaining one or more pastures are rested until after seed ripening of key species, and then grazed. Deferred rotation grazing differs from rest-rotation grazing in that no yearlong rest is provided.

Deferred Grazing

Deferred grazing is the postponement of grazing by livestock on an area for a specified period of time during the growing season. Under this system,

grazing would begin after key plants have reached an advanced stage of development in their annual growth cycle. The growing season rest provided by this system promotes plant reproduction, establishment of new plants, or restoration of the vigor of old plants (American Society of Range Management 1964).

Seasonal Grazing

Seasonal grazing is use by livestock during one or more seasons of the year. Seasonal grazing occurs during the same season each year, and does not involve rotation or deferment. For our purposes, seasonal grazing also includes season-long grazing (livestock use throughout the growing season). The most common types of seasonal grazing in the planning area are spring-fall sheep grazing, spring-summer cattle grazing, and season-long cattle grazing.

METHODOLOGY USED IN THE VEGETATIVE INVENTORY

A vegetative inventory was conducted during the 1980, 1981, and 1982 field seasons in conjunction with a third-order soil survey. The inventory gathered information on range site classification, present vegetation, ecological condition, and apparent trend.

Classification

Two classification systems were used during the inventory. Sites with remnant, native plant species were classified according to the Soil Conservation Service's Range Sites Inventory Method (USDA-SCS, 1976). This system classifies sites according to geographic region, soil characteristics, mean annual precipitation, and potential plant communities to the extent that it can be interpreted for the site.

Areas with exotic species introduced by seeding were classified with a modified technique. A seeding was classified according to geographic region, soil characteristics, and mean annual precipitation. The existing plant community was rated on the amount of seeded species occupying the site. Native vegetation on seeded sites was not given an ecological rating.

Ecological Condition

Inventory crews first identified and delineated the boundaries for the sites to be inspected. Estimates of plant species composition, based on weight, were then made for the plant community found on each site. The present species composition was then compared to the expected potential species composition from the SCS's Range Site Descriptions. A condition rating was computed for the vegetation on each site. This rating represents the amount of departure from the potential plant community.

Four condition classes are set forth by the SCS: excellent, good, fair, and poor. An excellent condition community would have 76-100 percent of the kinds, amounts, and proportions of vegetation produced in the potential plant community. Good, fair, and poor condition classes would have 51-75 percent, 26-50 percent, and 0-25 percent, respectively, of the kinds, amounts, and proportions of the potential vegetation.

No excellent condition range was mapped in the planning area, and this condition class was not used. Therefore, four condition classes were assigned during the vegetative inventory: good, fair, poor, and seeded.

Disturbed areas having few native species and having abundant cheatgrass are common on the planning area. The potential plant community on these kinds of sites is difficult to determine, and they were placed into a poor condition class even though a highly disturbed rating may be more appropriate.

Range Trend

Present range trend was determined using permanent, 3-foot by 3-foot photo trend plots, observed apparent trend ratings made during the vegetative inventory, and long-term (25 years +) photo points originally used for Parker 3-step transects. Allotments with permanent photo trend plots (28 allotments) were given a trend rating from those plots. If no long-term data were available, allotments were rated on observed apparent trend readings. Evidence of range trend gained from comparing old and new photographs of Parker 3-step transects were used as a backup for other trend data.

PROJECTING ECOLOGICAL CONDITION AND TREND

Projections of ecological (range) condition and range trend for Alternatives B, C, and D were made after considering present condition,

present vegetative composition, current trend, wildfire, proposed stocking levels, grazing systems, and other management facilities. The following assumptions were made.

1. All trend projections are for the long-term (20 years).

2. All seeding would be done in poor condition areas, changing them from poor to seeded.

3. Increased grazing, when accompanied by range developments, would not change existing trends.

4. Trend on new seedings would be stable once the seeding is established. Long-term trends were considered to be stable.

5. Poor condition areas with few native perennials (highly disturbed) may show upward trend with decreases in grazing and low incidence of wildfire, but would not change condition class.

6. Areas in high-poor condition could be expected to improve to fair condition (5 percent increase maximum) with upward trend.

7. Condition class changes from fair to good would be slow due to cheatgrass competition and the influence of fire. A maximum increase of 1 percent in good condition was projected.

DETERMINING THE PROPOSED STOCKING RATE

Alternative A

In Alternative A, five-year average use was the baseline used to determine the proposed stocking level. For some allotments, less than five years of actual use was averaged because wildfires closed a portion or all of the allotment to grazing for a time. This was adjusted downward by 328 AUMs to reflect transfer of land within grazing allotments from Federal ownership.

Alternatives B and C

In Alternatives B and C, active preference was used as the baseline to determine the proposed stocking level. This baseline was adjusted by using

monitoring data (trend, utilization, condition, and actual use studies), site productivity, allotment acreages, general observations, and professional judgment.

Downward Adjustments

The adjudicated stocking rate was used to estimate reductions in preference due to transfer of land within grazing allotments from Federal ownership.

$$\text{Adjudicated Stocking Rate} = \frac{\text{Total acres in a grazing allotment}}{\text{active preference}}$$

For example, an allotment with 1,000 acres in a transfer category and an adjudicated stocking rate of 5.7 acres per AUM would be reduced 175 AUMs as determined below.

$$\frac{1{,}000 \text{ Acres}}{5.7 \text{ acres/AUM}} = 175 \text{ AUMs}$$

In several allotments, the present resource conditions are not satisfactory. Management is satisfactory, but the problem is due to range fires or other temporary disturbances. In these allotments, no changes in active preference were proposed. In other allotments, existing management is unsatisfactory. In these allotments, downward adjustments in active preference were proposed based on monitoring data. For example, consider an allotment with the following conditions.

- Vegetation consists of primarily crested wheatgrass seedings with little potential for additional seedings.
- Trend is downward in all pastures.
- Conversion to a rest-rotation grazing system is not possible.
- The existing grazing system has been followed.
- Active preference is 600 AUMs.
- Utilization studies show 90 percent use on crested wheatgrass with five-year actual use of 610 AUMs.

Proper use factors indicate that vigor of crested wheatgrass can be maintained if average use does not exceed 60 percent. In this example, the proposed stocking level would be 407 AUMs as determined below.

$$\frac{60}{90} \times 610 = 407 \text{ AUMs}$$

In a few cases, downward adjustments in active preference were made based on condition class acreages, vegetation type acreages, and general observations. In these cases, a general stocking rate for seedings of 4 acres per AUM and an estimated stocking rate for annual and native range were used to estimate the proposed stocking rate. For example, consider an allotment with the following conditions.

- 4,100 acres of annual range with an estimated stocking rate of 10.2 acres per AUM, based on old surveys, actual use, and professional judgment.

- 2,200 acres of seeding with an estimated stocking rate of 4 acres per AUM based on area-wide experience.

The proposed stocking rate would be 952 AUMs as determined below.

$$\frac{4{,}100 \text{ acres}}{10.2 \text{ acres/AUM}} + \frac{2{,}200 \text{ acres}}{4 \text{ acres/AUM}} = 952 \text{ AUMs}$$

Upward Adjustments

Increases in active preference due to nonstructural range improvements were estimated as follows.

$$\frac{\text{Acres Treated}}{\text{Treatment Stocking Rate}} - \frac{\text{Acres Treated}}{\text{Adjudicated Stocking Rate}} = \text{Increase in AUMs}$$

The treatment stocking rate for seedings was assumed to be 4 acres per AUM for deferred-rotation grazing systems and 3 acres per AUM for rest-rotation grazing systems, based on past experience. The treatment stocking rate for brush control on native range was assumed to be 6 acres per AUM. In some cases, increases due to nonstructural range improvements have partially offset reductions in proposed stocking rates.

In some allotments monitoring data indicated that increases could be sustained while meeting existing AMP objectives. These increases up to active preference or total preference could be allowed because of present management practices.

Alternative D

In Alternative D, the proposed stocking level was selected to represent the carrying capacity during a drought year when annual species produce little or no forage. Actual use data from the 1977 drought year were used to

arrive at this level. The drought of 1977 had the most severe documented effect on annual forage production since the vegetation in the planning area has included the major annual vegetation component that it presently does.

Active preference was multiplied by 0.4 to give a 60 percent reduction in preference, the average amount of nonuse in 1977. This was adjusted downward further to reflect transfer of land within grazing allotments from Federal ownership.